

EBTRON®

Thermal Dispersion Airflow Measurement
Advantage II Silver Series



SILVER SERIES FAMILY

EBTRON's economical STx102 transmitter is ideal for use in smaller duct and plenum and in bleed-pressure measurement and control applications. The transmitter accepts a single probe and provides an analog 0-10VDC or 4-20mA analog output for connection to virtually all modern BAS systems.

EBTRON systems are factory calibrated to NIST-traceable volumetric flow standards and do not require additional transmitters or transducers to interface to your host Building Automation System. Lower your startup and maintenance costs, reduce energy consumption and improve control of your HVAC system. Specify EBTRON as the basis-of-design on all of your HVAC projects!



STA102-P
Duct & Plenum Probes

Economical Thermal Dispersion Technology - Replaces Pitot Arrays

The STA102-P is ideal for airflow measurement in sizes from 6 to 24 inches as a competitive upgrade to averaging pitot arrays. Factory calibrated to NIST-traceable volumetric flow standards with sensor node accuracy of 2% of reading from zero to 5,000 feet per minute. The STx102-P includes a single SP1 sensor probe with one to two sensors and the STA102 industrial grade integrated Silver transmitter.



STA102-T
Small Duct Probe

Precision Airflow Measurement for Small Ducts

Accurate and repeatable airflow measurement for VAV boxes or other small ducts up to 16 inches. Ideal for laboratory, hospital or clean room applications. Combine with outside occupancy counting systems on VAV systems to continuously reset outside airflow setpoints in accordance with the dynamic reset requirements of ASHRAE Standard 62.1-2004.



STA102-B "Bleed"
Bi-Directional

"Bleed" Airflow/Pressure Measurement

Determine ultra-low differential pressure by measuring the bleed airflow induced through the sensor. When combined with the appropriate mounting kit, the STx102-B is well suited for building and space pressure applications. This versatile device can also be used to verify airflow direction across control dampers and can be used to indirectly determine airflow rates across fixed orifices such as louvers or fixed position dampers.



Technical Specifications	STx102-P Ducts & Plenums	STx102-T Small Ducts/Terminal Boxes	STx102-B "Bleed" Airflow
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Sensor Probe Specifications

Sensor Assembly Model	SP1	ST1	SB1
Sensor Probe Configurations (probes x sensors/probe)	1x2 (independently wired sensors)	1x2 (independently wired sensors)	1x1 (independently wired sensors)
Accuracy: Airflow Rate	± 2% of reading, ±0.25% repeatability		
Accuracy: Temperature	± 0.15° F (± 0.08° C)		
Airflow Range	0 to 5,000 fpm (0 to 25.4 m/s)	0 to 3,000 fpm (0 to 15.2 m/s)	-3,000 to +3,000 fpm (-15.2 to +15.2 m/s)
Temperature Range	-20° F to 160°F (-28.9°C to 71.1°C)		
Humidity Operating Range	0 to 99% rh, non-condensing		
Sensor Distribution	Equal area	N/A	
Thermistor Type (heated and temperature sensor)	Bead-in-glass, hermetically sealed, thermistor probes (1 temperature sensor at each sensing location)		
Sensor Housing	Glass-filled polypropylene (Kynar® w/ SS option)	Glass-filled polypropylene	
Sensor Potting Material	Marine grade, waterproof epoxy		
Internal Wiring	Kynar coated copper		
Standard Size Ranges	8 in. (203.2 mm) to 120 in. (3048 mm)	4 in. (101.6 mm) to 18 in. (457.2 mm)	N/A
Custom Size Ranges	> 120 in. (3048 mm) to 192 in. (4978.4 mm) [sensor qty. limited]	N/A	
Construction	Gold anodized tube, 6063 aluminum alloy (316 SS w/SS option) with 304 SS mounting brackets	Mill finish tube, 6063 aluminum alloy with aluminum mounting bracket (insertion only)	Glass-filled polypropylene body with 0.5 in. (12.7mm) NPT female pipe connections
Connecting Cable Type	UL Plenum Rated		
Connecting Cable Length	10 ft [std.] (3.048 m), 50 ft (15.24 m) max.	3 ft [std.] (0.914 m), 50 ft (15.24 m) max.	
Connecting Cable Termination	0.625 in. (15.9 mm) plug [transmitter end]		
"Plug and Play" Sensor Probes	Probes do not require matching to transmitter		

Transmitter Specifications

Maximum Number of Sensing Points	2 (2 airflow + 2 temperature, independently processed)		
Maximum Number of Sensors per Transmitter	2 (per location)	1 bleed sensor	
Processor:	High speed microprocessor based design architecture with 2 channel multiplexer and industrial rated 12-bit A/D converter		
"Plug and Play" Sensor Systems	Probes do not require matching to transmitter		
Input Voltage Requirement	24 VAC 22.8 to 26.4VAC, isolation not required		
Input Power "Brownout" Protection	Using "watchdog" reset circuitry		
Input Power Requirement	8 VA		
Input Power Protection	Over voltage, over current and surge protection		
Enclosure	Aluminum		
User Interface	DIP switches and LED indication		
Display	Not available		
Standard Output to Host Controls	Airflow	Airflow (or equivalent Pressure)	
Units of Measure	I-P or S.I.		
Output Signal/Protocols Supported	STA102: Isolated 0-10VDC or 4-20mA (resolution 0.1% F.S.)		
Airflow Output Adjustments	Gain (using digital potentiometer, must be enabled)		
System Diagnostics	Sensor/transmitter diagnostic mode with LED flash notification		
Operating Temperature	-20° F to 120° F (-28.8° C to 48.8° C)		
Moisture	0 to 99% rh, non condensing (protect from water)		

Listings & Warranty

UL Listings	UL 873 Airflow & Temperature Indicating Devices
Standard Warranty	36 months from shipment (see Terms & Conditions of Sale for details)